radiation anticipated from the potential hazard (e.g., the project is of masonry and steel or reinforced concrete and steel construction).

§ 51.206 Implementation.

This subpart C shall be implemented for each proposed HUD-assisted project by the HUD approving official or responsible entity responsible for review of the project. The implementation procedure will be part of the environmental review process in accordance with the procedures set forth in 24 CFR parts 50 and 58.

[61 FR 13334, Mar. 26, 1996]

§ 51.207 Special circumstances.

The Secretary or the Secretary's designee may, on a case-by-case basis, when circumstances warrant, require the application of this subpart C with respect to a substance not listed in appendix I to this subpart C that would create thermal or overpressure effect in excess of that listed in § 51.203.

[61 FR 13334, Mar. 26, 1996]

§ 51.208 Reservation of administrative and legal rights.

Publication of these standards does not constitute a waiver of any right: (a) Of HUD to disapprove a project proposal if the siting is too close to a potential hazard not covered by this subpart, and (b) of HUD or any person or other entity to seek to abate or to collect damages occasioned by a nuisance, whether or not covered by the subpart.

APPENDIX I TO SUBPART C OF PART 51—SPECIFIC HAZARDOUS SUBSTANCES

The following is a list of specific petroleum products and chemicals defined to be hazardous substances under § 51.201.

HAZARDOUS LIQUIDS

Acetic Acid	Cellosolve
Acetic Anhydride	Cresols
Acetone	Crude Oil (Petroleum)
Acrylonitrile	Cumene
Amyl Acetate	Cyclohexane
Amyl Alcohol	No. 2 Diesel Fuel
Benzene	Ethyl Acetate
Butyl Acetate	Ethyl Acrylate
Butyl Acrylate	Ethyl Alcohol
Butyl Alcohol	Ethyl Benzene
Carbon Bisulfide	Ethyl Dichloride
Carbon Disulfide	Ethyl Ether
Gasoline	Methyl Alcohol
Heptane	Methyl Amyl Alcohol
Hexane	Methyl Cellosolve
Isobutyl Acetate	Methyl Ethyl Ketone
Isobutyl Alcohol	Naptha
Isopropyl Acetate	Pentane
Isopropyl Alcohol	Propylene Oxide
Jet Fuel and Kerosene	Toluene
	Vinyl Acetate
	Xylene

HAZARDOUS GASES

Acetaldehyde	Liquefied Natural Gas (LNG)
Butadiene	Liquefied Petroleum Gas (LPG)
Butane	Propane
Ethene	Propylene
Ethylene	Vinyl Chloride
Ethylene Oxide	
Hydrogen	

(Primary Source: ''Urban Development Siting with respect to Hazardous Commercial/Industrial Facilities,'' by Rolf Jensen and Associates, Inc., April 1982)

[49 FR 5105, Feb. 10, 1984; 49 FR 12214, Mar. 29, 1984]

APPENDIX II TO SUBPART C OF PART 51—DEVELOPMENT OF STANDARDS; CALCULATION METHODS

I. Background Information Concerning the Standards

(a) Thermal Radiation:

(1) *Introduction.* Flammable products stored in above ground containers represent a definite, potential threat to human life and structures in the event of fire. The resulting fireball emits thermal radiation which is absorbed by the surroundings. Combustible structures, such as wooden houses, may be ignited by the thermal radiation being emitted. The radiation can cause severe burn, injuries and even death to exposed persons some distance away from the site of the fire.

(2) *Criteria for Acceptable Separation Distance (ASD).* Wooden buildings, window drapes and trees generally ignite spontaneously when exposed for a relatively long period of time to thermal radiation levels of approximately 10,000 Btu/hr. sq. ft. It will take 15 to 20 minutes for a building to ignite at that degree of thermal intensity. Since the reasonable response time for fire fighting units in urbanized areas is approximately five to ten minutes, a standard of 10,000 BTU/hr. sq. ft. is considered an acceptable level of thermal radiation for buildings.

People in outdoor areas exposed to a thermal radiation flux level of approximately 1,500 Btu/ft^2 hr will suffer intolerable pain after 15 seconds. Longer exposure causes blistering, permanent skin damage, and even death. Since it is assumed that children and the elderly could not take refuge behind walls or run away from the thermal effect of